## (TS//SI//REL) Alert: Voice Masking Is Discovered in SIGINT

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*(TS//SI//REL) Use of voice-masking devices complicate efforts to "voice ID" SIGINT targets.*

(TS//SI//REL) Earlier this month, Counterterrorism (S2I) Levant Sunni Extremism language analysts noticed that the intercepts of two prominent Al-Qai'da associated extremists in the Levant contained voice masking; the audio either sounded far too high, or too low in pitch.

(TS//SI//REL) In one instance Saudi-based senior extremist financier Abu-Ubaydah used the voice-masking tool throughout his conversation dealing with his financing the travel of Yemeni suicide bombers to both Lebanon and Iraq. In another instance, Syria-based senior foreign fighter and facilitator Abu-Ghadiyah began in masked mode, went unrecognized by the recipient, turned the masking device off, and both had a good laugh.

(TS//SI//REL) Of course, this is no laughing matter, since all efforts to identify any speaker - both human and automated - will fail when voice alteration is used. But why would a caller do this at all? Surely the recipient would also fail to recognize the speaker, so absence of this very human method of sound identification would only induce suspicion and mistrust. Disturbingly, could some terrorists be aware of efforts by SIGINT agencies to identify them by their voices and thus have begun to resort to masking?

(TS//SI//REL) The devices used to alter voices in the few cases intercepted so far may not have been all that sophisticated. Simple changes in sampling rates done in mathematical software made the digital audiofiles sound more normal; in fact, two specific intercepts may have contained the same speaker. Still, automated detection of such anomalies will be difficult.

(TS//SI//REL) A way to undo masking for an intended recipient would be to use the same device and agree on settings prior to each transmission, so that unmasking could be done near-real time. For example, if the sampling rates were increased by 25% to make the speaker's pitch sound far too low, sampling rate reduction by the same amount at the other end would return a normal voice. Even simpler, if only voice messaging is used, the masked recorded audio could be undone after playback through an (un)masking device.

(TS//SI//REL) Because speaker identification services will continue to provide a key piece of the puzzle in tracking and capturing terrorists, voice-masking techniques need to be understood early. Tools developed for other intelligence applications are available and will be acquired to study this emerging problem.

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